PACK FOR FREE-FLOWING OR PASTY PRODUCTS

The invention relates to a pack, particularly for free-flowing or pasty products, with a body, the circumference of which is at least approximately constant or decreases slightly along at least almost its entire length, with a removal opening and a filling opening.

The products in such packs are generally squeezed out and thus removed with the help of a plunger. The problem with such packs is, however, that they cannot be stacked in their unfilled and / or emptied state and therefore take up a very great deal of space.

The purpose of the invention is to propose a pack of the kind outlined above that is stackable.

In the solution to this problem proposed by the invention, the body is tapered in one section by at least one pleat or similar shaping.

Several identical packs can be stacked inside each other as a result.

It has also proved to be very advantageous in this context if the body is designed to taper conically over its length.

Particularly space-saving stacking is guaranteed in this way.

In accordance with a further development of the invention, it is extremely advantageous if the body is folded into a meander shape.

This guarantees that the material is distributed evenly around the circumference of the body.

In this context, it has proved to be very advantageous if the meander-shaped pleating is only provided in the conically tapered section of the body.

The body is given its conical form by the meander-shaped pleating.

In another very advantageous development of the invention, the body is designed to be very conical in the area of one of its ends.

A removal opening resembling a piping bag is created by doing this.

In a further very advantageous development of the invention, a collar or similar element that projects outwards is provided at one end of the pack.

This collar can be used to secure the pack in a removal device. It also makes sure that stacked packs can be separated from each other.

In another very advantageous development of the invention, the pack is open at one end and is designed to permit closure by a lid.

The pack can be filled particularly easily and quickly through this opening. The contents of the pack can in addition be pressed out through the removal opening by this lid.

In this context it has proved to be very advantageous if the lid is sealed on.

It is also very advantageous if the lid is glued on.

Both of these alternatives guarantee a verifiable tamper-evident pack closure.

It has proved to be very advantageous if the lid is fitted on or in the body.

The pack is closed tightly by the lid in both cases.

It is also extremely advantageous if the lid has a predetermined rupture line.

The lid or part of the lid can be separated from the body along this predetermined rupture line and can if necessary be pressed into the body with the help of a plunger.

It has also proved to be very advantageous if the lid is pressed into the space created by the body when the pack is being emptied.

The contents of the pack can be pressed out through the removal opening with this lid, as a result of which a tamper-evident feature is produced.

In a further very advantageous development, the removal opening is closed by sealing and / or gluing.

This makes sure that the product is not able to escape from the pack inadvertently.

It has also proved to be very advantageous if the removal opening is designed to have a specific shape, such as the approximate shape of a star.

This improves removal of the product, while the latter is given an attractive appearance after removal as a result.

It is also extremely advantageous if the removal opening is defined by a predetermined rupture line.

This means that the removal opening can be exposed by removing the closure.

It has also proved to be very advantageous if the removal opening is designed to project.

A projecting removal opening can, for example, be opened with a knife.

In another advantageous development of the invention, the removal opening is closed by a closure.

Then the removal opening can be opened particularly easily.

It is very advantageous in this context if the closure is glued or sealed on.

Sealing or gluing is a reliable and inexpensive method of fastening.

In a further advantageous development of the invention, the closure is designed in the form of a label.

A label can communicate information, i.e. include details about the contents, in addition to its function as a closure.

In a very advantageous further development of the invention, the body is produced from a plastic such as polypropylene or polyethylene.

It is very advantageous in this context if the body is manufactured by the injection moulding process.

Plastics can be processed very effectively by the injection moulding process.

It is also very advantageous if the body is produced by thermoforming.

Thermoforming is a standard process for producing plastic containers with thin walls in particular.

It is, however, also very advantageous if in accordance with the invention the body is wound from paper and is closed along a longitudinal seam.

Paper that may be coated with plastic too represents an alternative to packs made exclusively of plastic.

One embodiment of the invention is shown in the drawings.

Fig. 1 is a view of a pack in accordance with the invention,
Fig. 2 is a cross section of the same pack and
Fig. 3 is a picture of this pack.

1 in Fig. 1 is a pack that is designed to hold free-flowing and pasty goods, such as soft ice cream or similar products, with a body 2. At one of its ends, the body 2 has a closable filling opening 3, which can be closed by a lid 4. The lid 4 is secured in position against the inside wall of the body 2. A different method for fastening the lid 4 is, however, also conceivable. The body 2 is closed at its other end. A removal opening 6 that has a star-shaped rim 7 is provided in the wall 5 of this end. This rim 7 can have a different outline instead. The removal opening is closed with a closure 8 in the form of a label, although other closures can be used instead. The closure 8 is sealed on, but it can be glued or fastened by some other means too. It is also conceivable that the removal opening is designed to project. Part of the projecting removal opening is then cut off to open the pack. In a section 9 shortly before the end wall 5, the body 2 tapers sharply towards this wall. The body 2 has a collar 10 that projects outwards in the area of the filling opening 3.

The body tapers slightly conically between the collar 10 and the section 9. The tapered shape makes it possible to stack several unfilled and / or emptied packs 1 inside each other.

The pack 1 is emptied with the help of a plunger that is not illustrated, by pressing the lid 4 into the space defined by the body with the plunger. The plunger has the same diameter as the filling opening 3.

The body 2 meanders in the area where it tapers conically between the collar 10 and the section 9, the deviations of the meanders 11 from a circle becoming larger as the tapering increases. The circumference of the body remains constant over the entire tapered area as a result.

When the plunger is pressed into the tapered area, the plunger widens the taper until the cross section corresponds to that of the plunger. Depending on the material used for the body 2, this widening is reversible, i.e. the body returns to its original shape as soon as the plunger is removed from the body 2.

The body 2 is configured to meander in the section 9 that tapers sharply too. When the body 2 is widened, the section 9 is pulled in the direction of the plunger and is at least at approximately right angles to the rest of the body 2 when the plunger has been pressed in completely. This makes sure that none of the product is left in the pack 1.

It is, however, also conceivable that the circumference of the body 2 decreases slightly from the filling opening in the direction of the removal opening 6. When the plunger is pressed into the pack 1, the body 2 is then widened.

It is also conceivable that the lid 4 itself is designed to be a plunger and is pressed into the pack 1.

In combination with a slightly decreasing body circumference, it is then guaranteed that the plunger which has been pressed into the pack 1 cannot be removed from the same any longer. The pack can thus be used exactly once and therefore has a particularly effective tamper-evident feature.

The emptied pack 1 and the unfilled pack 1 can be stacked inside each other, provided that the plunger is removed again. The collar 10 stops the packs 1 from sliding inside each other to such an extent that they are difficult to separate from one another again. Stacking the packs 1 reduces the volume of the packs 1 that has to be handled when several packs have been inserted inside each other.

The body 2 can be produced from plastic, particularly polypropylene or polyethylene, paper or a similar material.